8th Coral Reef Task Force Meeting
October 2-3, 2002
San Juan, Puerto Rico

Resolution 8-5: Coral Reefs and Climate Change

The U.S. CRTF requests that DOI and NOAA and EPA, along with other interested Task Force members, advance the development of an interagency, public/ private partnership for planning a comprehensive, integrative program for understanding local and system-wide coral reef responses to climate change, including its application of this knowledge for local reef management. The CRTF also directs this team to report back to the CRTF on the progress of developing the program at the next meeting.

Coral Reefs and Climate Change Program: A Program for Long-Term System Assessment, Identification, Prediction, and Adaptive Management of Coral Reef Ecosystems.

Summary

Development of an interagency, public/private partnership for developing a comprehensive, integrative program to a) study and assess the system-wide and local responses of coral reef communities to a changing climate, and b) evaluate, advise on and apply adaptive management to meet changing needs of the system over short and long-term time scales.

Purpose

The purposes of the "Coral Reefs and Climate Change Program" are:

1. To develop a comprehensive, scientifically-based program for detecting, studying, predicting, and understanding the response of coral reef ecosystem structure and function to changing climate, and the socioeconomic impacts of such;
2. To integrate the use of programs and resources of the U.S. Coral Reef Task Force, along with the larger coral reef research and conservation community and interested stakeholders, into a system-wide cooperative effort to understand coral responses to climate change; including GIS/web-based data product delivery mechanisms;
3. To use the knowledge for effective long-term preservation and adaptive management of the coral reef ecosystems for both jurisdictional and marine protected area managers.

Background

At the U.S. Coral Reef Task Force meeting in Hawaii on March 5-6, 1999, they stated:

To be most effective as early and sensitive warning signals of global climate change, coral reef bleaching events must be monitored on site and through remote sensing, and investigated and reported upon by the scientific community. In order to best inform future decisions, the research findings must then be translated effectively into public policy and communicated to funding agencies and the public.

Not long after this decision by the Task Force, scientists recognized and reported on the predicted change in ocean chemistry from the changing climate is at least as troublesome for coral reefs. Understanding the mechanisms of change and adaptation on coral reefs resulting from individual stresses and their combinations, and especially those due to the changing climate, will require systematic study on a network of reef areas that are impacted less from other human-induced stressors. Application of this understanding will be directly useful for effectively diagnosing impacts and managing coral reefs around the world, especially with respect to the more local and controllable threats.

Program Concept

Although significant capabilities exist and are being applied for understanding and predicting effects of climate change on reefs, many of these programs exist independently -- without a systematic perspective or objective. These capabilities will be utilized throughout this program, by bringing them together in a cohesive analysis, identifying gaps in information and knowledge, and developing projects to address those gaps. To be effective for addressing the multiple stresses of climate change, planning and management of the program will require systematic observation and thoughtful interpretation at both the short and long-term time scales. This should capitalize on the protections provided by the wide-spread, near-pristine coral reefs in the National Wildlife Refuges, National Parks, National Marine Sanctuaries, Coral Reef Ecosystem Reserve, and other protected areas along natural latitudinal and longitudinal gradients.

The goal of the program is a continuing and increasingly effective flow of useful information in support of decision making for management and adaptation purposes. This program will be designed to deliver predictive tools for managers, enabling them to incorporate the effects of climate change into their management planning and design.

"First Steps" Proposal

1. Within one month, DOI and NOAA will hold a Steering Committee meeting of interested CRTF members to initiate coordination, planning, and analysis of current capabilities and resources that may be included in developing the program.
2. Convene a stakeholder workshop early in 2003 to further develop the framework and initial strategic program for the "Coral Reefs & Climate Program" as outlined above .